US 20030023919A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2003/0023919 A1

Yuan et al. (43) Pub. Date: Jan. 30, 2003

(54) STOP ITERATION CRITERION FOR TURBO DECODING

(76) Inventors: Warm Shaw Yuan, San Diego, CA (US); Mingming Zhang, San Diego, CA (US); Handi Santosa, San Diego, CA (US)

Correspondence Address:
SKJERVEN MORRILL LLP
25 METRO DRIVE
SUITE 700
SAN JOSE, CA 95110 (US)

(21) Appl. No.: 09/905,780

(22) Filed: Jul. 12, 2001

Publication Classification

(51) Int. Cl.[7] H03M 13/00

(52) U.S. Cl. 714/755

(57) ABSTRACT

A stop iteration criterion in a turbo decoder is provided where the turbo decoder monitors the bit decisions from each constituent decoder for each data bit at each iteration and ceases further iterations when the bit decisions converge. In a turbo decoder having N-number of constituent decoders, the bit decisions from each of the N constituent decoders are compared in each iteration. When the bit decisions of the N constituent decoders differ, the turbo decoder proceeds to the next decoding iteration. When the bit decisions of the N constituent decoders converge, the decoding iteration is stopped and the bit decisions are provided as the final decoding result.